AF

| **TRANSMITTAL OF APPEAL BRIEF (Large Entity)** | Docket No. DCH
NRT.0072US |

In Re Application Of: Peter A. Barany et al.

| Application No.
09/715,787 | Filing Date
11-17-2000 | Examiner
Kevin D. Mew | Customer No.
21906 | Group Art Unit
2664 | Confirmation No.
9500 |
|---|---|---|---|---|---|

Invention: **Interleaving Data Over Frames Communicates in a Wireless Channel**

<u>COMMISSIONER FOR PATENTS:</u>

Transmitted herewith in triplicate is the Appeal Brief in this application, with respect to the Notice of Appeal filed on **October 17, 2005.**

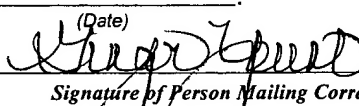The fee for filing this Appeal Brief is: **$500.00**

☒   A check in the amount of the fee is enclosed.

☐   The Director has already been authorized to charge fees in this application to a Deposit Account.

☒   The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No.   **20-1504** (NRT. 0072US)

☐   Payment by credit card. Form PTO-2038 is attached.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.
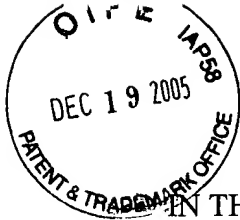
Signature

Dated: **December 14, 2005**

Dan C. Hu
Registration No. 40,025
TROP, PRUNER & HU, P.C.
8554 Katy Freeway, Suite 100
Houston, TX 77024
Telephone: (713) 468-8880, ext. 304
Facsimile: (713) 468-8883

I hereby certify   that   this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on
12-14-2005
(Date)

Signature of Person Mailing Correspondence
Ginger Yount
Typed or Printed Name of Person Mailing Correspondence

CC:

P30LARGE/REV06

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Peter A. Barany et al.	§ Art Unit:	2664
		§	
Serial No.:	09/715,787	§	
		§ Examiner:	Kevin D. Mew
Filed:	November 17, 2000	§	
		§	
For:	Interleaving Data Over Frames	§ Atty. Dkt. No.:	NRT.0072US
	Communicated in a Wireless	§	(12383RRUS02U)
	Channel	§	

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

<u>APPEAL BRIEF PURSUANT TO 37 C.F.R § 41.37</u>

Sir:

The final rejection of claims 1, 3, 4, 13, 31-34, 36, and 39-41 is hereby appealed.

I. REAL PARTY IN INTEREST

The real party in interest is the Nortel Networks Limited.

II. RELATED APPEALS AND INTERFERENCES

None.

III. STATUS OF THE CLAIMS

Claims 1, 3, 4, 13, 31-34, 36, and 39-41 have been finally rejected and are the subject of

this appeal.

Date of Deposit: December 14, 2005

I hereby certify under 37 CFR 1.8(a) that this correspondence is being deposited with the United States Postal Service as **first class mail** with sufficient postage on the date indicated above and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313.

Ginger Yount

Claims 5-12, 14-16, 18-29, 37, and 38 have been allowed.

Claims 2, 17, 30, and 35 have been cancelled.

IV.   STATUS OF AMENDMENTS

No amendments have been submitted after final rejection.

V.   SUMMARY OF THE CLAIMED SUBJECT MATTER

The following provides a concise explanation of the subject matter defined in each of the

independent claims involved in the appeal, referring to the specification by page and line number

and to the drawings by reference characters, as required by 37 C.F.R. § 41.37(c)(1)(v).   Each

element of the claims is identified by a corresponding reference to the specification and drawings

where applicable.   Note that the citation to passages in the specification and drawings for each

claim element does not imply that the limitations from the specification and drawings should be

read into the corresponding claim element.

Independent claim 1 recites a method of interleaving speech data over a plurality frames,

comprising:

> interleaving the speech data according to a first algorithm over plural frames communicated over a wireless channel for a first set of speech data (Figs. 4A-4B; Specification, p. 11, line 18-p. 13, line 2; Figs. 5A-5B; Specification, p. 15, line 23-p. 16, line 2); and

> interleaving the speech data according to a second algorithm over plural frames communicated over the wireless channel for a second set of speech data (Figs. 4A-4B; Specification, p. 11, line 18-p. 13, line 2; Figs. 5A-5B; Specification, p. 15, line 23-p. 16, line 2).

Independent claim 34 recites a data signal embodied in a carrier wave and containing

instructions that when executed cause a system to:

> interleave a first speech traffic frame from a mobile station over plural bursts according to a first algorithm (Figs. 4A-4B; Specification, p. 11, line 18-p. 13, line 2; Figs. 5A-5B; Specification, p. 15, line 23-p. 16, line 2); and

> interleave a second speech traffic frame from the mobile station over plural bursts according to a second algorithm (Figs. 4A-4B; Specification, p. 11, line 18-p. 13, line 2; Figs. 5A-5B; Specification, p. 15, line 23-p. 16, line 2).

Independent claim 39 recites an article comprising at least one storage medium

containing instructions that when executed cause a system to:

> receive traffic over a wireless channel portion from a first mobile station involved in half-rate communication (Fig. 3:302; Specification, p. 10, lines 6-9);

> detect that the first mobile station has entered discontinuous transmission mode (Fig. 3:308; Specification, p. 10, lines 10-12);

> in response to detecting that the first mobile station has entered discontinuous transmission mode, re-assign the wireless channel portion to a second mobile station to enable multiplexing of traffic from the second mobile station onto the wireless channel portion while the first mobile station is in discontinuous transmission mode (Fig. 3:310; Specification, p. 10, lines 13-16);

> receive a request from the first mobile station to re-acquire the wireless channel portion, the request transmitted by the first mobile station in response to the first mobile station exiting discontinuous transmission mode (Fig. 3:314; Specification, p. 11, lines 9-13); and

> sending an assignment message to the first mobile station to assign the wireless channel portion in response to the request (Fig. 3:316; Specification, p. 11, lines 13-17).

Independent claim 41 recites a system for use in a mobile communications network, comprising:

> a wireless interface (Fig. 8A:225, 227) adapted to receive traffic over a wireless channel portion from a first mobile station involved in half-rate communications (Fig. 3:302; Specification, p. 10, lines 6-9); and

> a controller (Fig. 8A:208, 212) adapted to receive an indication that the first mobile station has entered discontinuous transmission mode and, in response to receiving the indication that the first mobile station has entered discontinuous transmission mode, to multiplex traffic from a second mobile station onto the wireless channel portion while the first mobile station is in discontinuous transmission mode (Fig. 3:308, 310; Specification, p. 10, lines 10-16),

> wherein the controller is adapted to further:

> receive a request from the first mobile station to re-acquire the wireless channel portion, the request transmitted by the first mobile station in response to the first mobile station exiting discontinuous transmission mode (Fig. 3:314, Specification, p. 11, lines 9-13); and

> send an assignment message to the first mobile station to assign the wireless channel portion in response to the request (Fig. 3:316; Specification, p. 11, lines 13-17).

VI.   GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A.   **Claims 1, 3, 4, 13, And 34 Were Rejected Under § 103 Over U.S. Patent Application Publication No. 2004/0062274 (Hakansson).**

B.   **Claims 31-33, 36, And 39-41 Were Rejected Under § 103 Over Hakansson In View Of U.S. Patent No. 6,084,865 (Dent).**

VII.   ARGUMENT

The claims do not stand or fall together. Instead, Appellant presents separate arguments for various independent and dependent claims. Each of these arguments is separately argued below and presented with separate headings and sub-headings as required by 37 C.F.R. § 41.37(c)(1)(vii).

A. **Claims 1, 3, 4, 13, And 34 Were Rejected Under § 103 Over U.S. Patent Application Publication No. 2004/0062274 (Hakansson).**

1. **Claims 1, 3, 4, 13, and 34.**

Independent claim 1 was rejected as being obvious over U.S. Publication No. 2004/0062274 (Hakansson) alone. It is respectfully submitted that a *prima facie* case of obviousness has not been established against claim 1 over Hakansson. Hakansson does not disclose or suggest interleaving *speech* data according to a first algorithm over plural frames for a first set of *speech* data, and interleaving *speech* data according to a *second* algorithm over plural frames for a second set of *speech* data. Hakansson describes a *single* interleaving scheme for speech data—diagonal interleaving. *See* Hakansson, ¶¶ [0011], [0018], [0021], [0057], [0064], claim 2. In Hakansson, a different interleaving scheme is applied to certain SID frames (which cannot be considered speech data). Hakansson, ¶ [0027].

As conceded by the Examiner, Hakansson does not disclose interleaving speech data according to a second algorithm for a second set of speech data. 8/10/2005 Office Action at 2. Nevertheless, the Examiner stated that claim 1 would be obvious over Hakansson in light of the fact that Hakansson discloses SID frames being interleaved according to a different interleaving algorithm. *Id.* at 3. The Examiner stated that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the interleaving schemes of Hakansson such that the second interleaving scheme called block interleaving scheme that applies to the SID frames is being used as a second algorithm to interleave speech data such as the block interleaving scheme disclosed in Hakansson." *Id.*

Appellant respectfully disagrees that there is any teaching or suggestion in Hakansson, whether implied or explicit, of a modification of the techniques used in Hakansson to apply the second interleaving algorithm to speech data rather than to SID frames. In ¶ [0018] of

Hakansson, Hakansson states that applying a common interleaving scheme for SID and speech frames poses problems. To overcome these problems, Hakansson proposes a different interleaving algorithm for SID frames than for speech frames. However, there is absolutely no teaching or suggestion whatsoever in Hakansson of any need or desirability to use different algorithms for different sets of speech frames. "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch,* 972 F.2d 1260, 1266, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992).

Although a person of ordinary skill in the art looking to the teachings of Hakansson would have recognized some benefits of using a second algorithm for SID frames, such a person of ordinary skill in the art looking to the teachings of Hakansson would not have been motivated to modify the Hakansson techniques to use different algorithms for different sets of speech data, as recited in claim 1.

The Examiner made the following additional observation:

> Furthermore, the Hakansson reference discloses that speech frames can be diagonal interleaved (see paragraph 0011) and block diagonally interleaved (see claim 26 of Hakansson) and the motivation to do so is to minimize the transmission delay of codec mode information in order to achieve the best possible performance of codec mode adaptation of a multimode communication system (see paragraph 0021).

8/10/2005 Office Action at 9.

These two passages of Hakansson cited by the Examiner do not provide any suggestion that two different interleaving algorithms can be used for two sets of speech data. Paragraph [0011] of Hakansson states that in the prior art, the same channel coding and diagonal interleaving is used for speech frames and for SID frames. Claim 26 of Hakansson distinguishes this prior art by reciting that speech frames are block diagonally interleaved and SID frames are

block interleaved. Thus, a person of ordinary skill in the art looking to these passages of Hakansson would understand that the prior art to Hakansson uses the same interleaving for both speech frames and SID frames, while claim 26 of Hakansson purportedly improves on this by using block diagonal interleaving for speech frames and block interleaving for SID frames.

The Examiner also cited to U.S. Patent No. 5,091,942 (the "'942 patent") as somehow providing a motivation for modifying Hakansson to achieve the claimed invention. Specifically, the Examiner pointed to passages in column 1 (lines 21-25) and column 2 (lines 11-25) as supporting this suggestion. These cited passages of the '942 patent refer to enhancing the security of data communications within a system (column 1), and enhancing bandwidth of voice channels in a cellular radio telecommunications systems (column 2). It is unclear what relevance these passages have with respect to using different interleaving algorithms for two sets of speech data.

The Examiner also pointed to Fig. 2, in particular elements 108 and 110 of the '942 patent, as providing some motivation to modify Hakansson. Element 108 is a 2-burst interleaver, while element 110 is a 22-burst interleaver. The 2-burst interleaver 108 divides each data message to be transmitted by the mobile station ('942 patent, 8:29-32), while the 22-burst interleaver 110 divides the SACCH (slow associated control channel) data into 22 consecutive time slots ('942 patent, 8:43-46). Here, the 2-burst interleaver is used for a data message, while the 22-burst interleaver is used for a control channel message. Thus, the '942 patent also fails to suggest any modification of Hakansson to achieve the claimed invention.

A more fundamental error made by the Examiner is the citation of the '942 patent for use in the obviousness rejection of claim 1 over Hakansson *alone*. The '942 patent was not relied upon by the Examiner for explaining how some concept disclosed in Hakansson would have

been understood by a person of ordinary skill in the art. The passages of the '942 patent relied upon by the Examiner are completely unrelated to any teaching of Hakansson. Therefore, it appears that the '942 patent has no relevance in the obviousness rejection over Hakansson alone. If the obviousness rejection is based on the combination of Hakansson and the '942 patent, then a new ground of rejection has been raised against claim 1, which would require withdrawal of the final rejection.

In view of the foregoing, it is respectfully submitted that the obviousness rejection of claim 1 is defective and should be reversed. Independent claim 34 is allowable for similar reasons as claim 1.

Reversal of the final rejection of the above claims is respectfully requested.

B.   Claims 31-33, 36, And 39-41 Were Rejected Under § 103 Over Hakansson In View Of U.S. Patent No. 6,084,865 (Dent).

1.   Claims 31-33, 36, and 39-41

Each of independent claims 39 and 41 was rejected as being obvious over Hakansson in view of Dent. It is respectfully submitted that claim 39 is not obvious over Hakansson and Dent for at least the following reason: the references when combined do not teach or suggest all elements of claim 30. *See* MPEP § 2143 (8th ed., Rev. 2), at 2100-129.

As conceded by the Examiner, the multiplexing feature of claim 39 is not disclosed by Hakansson. 8/10/2005 Office Action at 5. The Examiner relied, instead, upon Dent for this teaching. *Id.* at 5-6. Claim 39 further recites receiving a request from the first mobile station to re-acquire the wireless channel portion, where the request is transmitted by the first mobile station in response to the first mobile station exiting a discontinuous transmission mode. Claim 39 also recites sending an assignment message to the first mobile station to assign the wireless

channel portion in response to the request. The Examiner cited ¶¶ [0028] and [0084] of Hakansson as teaching the request receiving and assignment sending acts of claim 39. However, Appellant respectfully disagrees with this assertion by the Examiner, since ¶ [0028] of Hakansson refers to the transmission of first and second types of SID frames during source data inactivity, and transmitting a third type of SID frame to indicate a transition from source data inactivity to source data activity. Paragraph [0084] of Hakansson describes that when an inactive link resumes speech transmission, a codec mode corresponding to the last received codec mode request is selected. Neither of these passages of Hakansson refers to receiving a *request* from a mobile station to *re-acquire a wireless channel portion* in response to the first mobile station exiting this continuous transmission mode, and in response to the request, sending an *assignment* message to the first mobile station to *assign* the wireless channel portion.

The third type of SID frame noted in ¶ [0028] of Hakansson is used for indicating a transition from source data inactivity to source data activity. This third type SID frame does not constitute a request from the mobile station to *re-acquire* the wireless channel portion, as recited in claim 39. Paragraph [0084] refers to an inactive link resuming speech transmission, and a codec mode corresponding to the last received codec mode being selected due to resumption of speech transmission. This passage does not teach sending or suggest an assignment message to the first mobile station to *assign the wireless channel portion* in response to the request.

Therefore, even if Hakansson and Dent can be properly combined, the hypothetical combination of Hakansson and Dent does not teach or suggest all elements of claim 39. A *prima facie* obviousness rejection has therefore not been established against claim 39.

Independent claim 41 is not obvious over Hakansson and Dent for similar reasons.

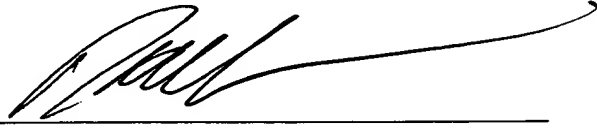Reversal of the final rejection of the above claims is respectfully requested.

VIII. CONCLUSION

In view of the foregoing, reversal of all final rejections and allowance of all pending claims is respectfully requested.

Respectfully submitted,

Date: 12-14-2005

Dan C. Hu
Registration No. 40,025
TROP, PRUNER & HU, P.C.
8554 Katy Freeway, Suite 100
Houston, TX 77024
Telephone: (713) 468-8880
Facsimile: (713) 468-8883

APPENDIX OF APPEALED CLAIMS

The claims on appeal are:

1   1.   A method of interleaving speech data over a plurality frames, comprising:

2   interleaving the speech data according to a first algorithm over plural frames

3   communicated over a wireless channel for a first set of speech data; and

4   interleaving the speech data according to a second algorithm over plural frames

5   communicated over the wireless channel for a second set of speech data.

1   3.   The method of claim 1, wherein interleaving the speech data according to the first

2   or second algorithm comprises interleaving over frames of a multiframe.

1   4.   The method of claim 3, wherein interleaving over frames of the multiframe

2   comprises interleaving over a General Packet Radio Service multiframe.

1   13.   The method of claim 3, wherein the multiframe comprises plural blocks and each

2   block comprises plural frames, each frame containing plural bursts, the data being carried in data

3   frames interleaved over bursts in the plural frames, the method further comprising:

4   receiving an end-of-data indicating frame to indicate that a data frame is the last

5   data frame; and

6   interleaving the end-of-data indicating frame according to predetermined

7   algorithms,

8   wherein interleaving the data frames according to the first and second algorithms

9   and the end-of-data indicating frame according to the predetermined algorithms enables the end-

10   of-data indicating frame to end within the same block carrying the last data frame.

1   31.   The article of claim 39, wherein the instructions when executed cause the system

2   to:

3   receive speech traffic from the first mobile station over the wireless channel

4   portion.

1   32.   The article of claim 31, wherein the instructions when executed cause the system

2   to receive another type of traffic from the second mobile station.

1   33.   The article of claim 39, wherein the instructions when executed cause the system

2   to interleave a first traffic frame from the first mobile station over plural bursts according to a

3   first algorithm and to interleave a second traffic frame from the first mobile station over plural

4   bursts according to a second algorithm.

1   34.   A data signal embodied in a carrier wave and containing instructions that when

2   executed cause a system to:

3   interleave a first speech traffic frame from a mobile station over plural bursts

4   according to a first algorithm; and

5   interleave a second speech traffic frame from the mobile station over plural bursts

6   according to a second algorithm.

1   36.   The method of claim 1, wherein interleaving the speech data according to the first

2   algorithm over plural frames for the first set of speech data comprises interleaving the first set of

3   speech data from a half-rate mobile station according to the first algorithm over plural frames,

4   and

5   wherein interleaving the speech data according to the second algorithm over

6   plural frames for the second set of speech data comprises interleaving the second set of speech

7   data from a half-rate mobile station according to the second algorithm over plural frames.

1   39.   An article comprising at least one storage medium containing instructions that
2   when executed cause a system to:
3   receive traffic over a wireless channel portion from a first mobile station involved
4   in half-rate communication;
5   detect that the first mobile station has entered discontinuous transmission mode;
6   in response to detecting that the first mobile station has entered discontinuous
7   transmission mode, re-assign the wireless channel portion to a second mobile station to enable
8   multiplexing of traffic from the second mobile station onto the wireless channel portion while the
9   first mobile station is in discontinuous transmission mode;
10   receive a request from the first mobile station to re-acquire the wireless channel
11   portion, the request transmitted by the first mobile station in response to the first mobile station
12   exiting discontinuous transmission mode; and
13   sending an assignment message to the first mobile station to assign the wireless
14   channel portion in response to the request.

1   40.   The data signal of claim 34, wherein interleaving the first speech traffic frame
2   according to the first algorithm over plural bursts comprises interleaving the first speech traffic
3   frame from a half-rate mobile station according to the first algorithm over plural bursts, and
4   wherein interleaving the second speech traffic frame according to the second
5   algorithm over plural bursts comprises interleaving the second speech traffic frame from a half-
6   rate mobile station according to the second algorithm over plural bursts.

1   41.   A system for use in a mobile communications network, comprising:

2   a wireless interface adapted to receive traffic over a wireless channel portion from

3   a first mobile station involved in half-rate communications; and

4   a controller adapted to receive an indication that the first mobile station has

5   entered discontinuous transmission mode and, in response to receiving the indication that the

6   first mobile station has entered discontinuous transmission mode, to multiplex traffic from a

7   second mobile station onto the wireless channel portion while the first mobile station is in

8   discontinuous transmission mode,

9   wherein the controller is adapted to further:

10   receive a request from the first mobile station to re-acquire the wireless channel

11   portion, the request transmitted by the first mobile station in response to the first mobile station

12   exiting discontinuous transmission mode; and

13   send an assignment message to the first mobile station to assign the wireless

14   channel portion in response to the request.

APPENDIX OF ALLOWABLE CLAIMS

1   5.   A method of interleaving data over a plurality frames, comprising:

2   interleaving the data according to a first algorithm over plural frames

3   communicated over a wireless channel for a first set of data; and

4   interleaving the data according to a second algorithm over plural frames

5   communicated over the wireless channel for a second set of data,

6   wherein interleaving the data according to the first or second algorithm comprises

7   interleaving over frames of a multiframe,

8   wherein the multiframe comprises plural blocks, each block having four frames,

9   each frame containing plural bursts, and the data is carried in data frame N starting in block B(x),

10   and wherein interleaving the data frame N according to the first and second algorithms comprises

11   interleaving the data frame N over blocks $B(x + 2k)$ and $B(x + 2k + 2)$, where $k = INT(N/2)$.

1   6.   The method of claim 5, wherein interleaving the data according to the first

2   algorithm comprises interleaving the data frame N over bursts in the last three frames in block

3    $B(x + 2k)$ and the first frame in block $B(x + 2k + 2)$, if N is even.

1   7.   The method of claim 6, wherein interleaving the data according to the second

2   algorithm comprises interleaving the data frame N over bursts in the last frame in block $B(x + 2k)$

3   and the first three frames in block $B(x + 2k + 2)$, if N is odd.

1   8.   The method of claim 7, wherein interleaving the data according to the first and

2   second algorithms comprises interleaving speech data.

1   9.   The method of claim 8, wherein interleaving the speech data comprises

2   interleaving speech data of a half-rate mobile station.

i

Appln. Serial No. 09/715,787
Appeal Brief Under 37 C.F.R. § 41.37

1   10.   The method of claim 7, further comprising:

2   receiving an end-of-data indicating frame to indicate that the data frame N is the

3 last data frame; and

4   interleaving the end-of-data indicating frame over bursts in the last frame in block

5 B(x + 2k) and the first two frames of block (Bx + 2k + 2), if M is even.

1   11.   The method of claim 10, further comprising repeating the end-of-data indicating

2 frame over bursts in the last two frames of block B(x +2k + 2).

1   12.   The method of claim 10, further comprising interleaving the end-of-data

2 indicating frame over bursts in the last three frames of block B(x + 2k + 2), if M is odd.

1   14.   A method of interleaving data over a plurality frames, comprising:

2   interleaving the data according to a first algorithm over plural frames

3   communicated over a wireless channel for a first set of data; and

4   interleaving the data according to a second algorithm over plural frames

5   communicated over the wireless channel for a second set of data,

6   wherein interleaving the data according to the first or second algorithm comprises

7   interleaving over frames of a multiframe,

8   wherein the multiframe comprises plural blocks and each block comprises plural

9   frames, each frame containing plural bursts, the data being carried in data frames interleaved

10   over bursts in the plural frames, the method further comprising:

11   receiving an end-of-data indicating frame to indicate that a data frame is the last

12   data frame; and

13   interleaving the end-of-data indicating frame according to at least one

14   predetermined algorithm,

15   wherein interleaving the data frames according to the first and second algorithms

16   and the end-of-data indicating frame according to the at least one predetermined algorithm

17   enables the end-of-data indicating frame to end within the same block carrying the last data

18   frame,

19   wherein the last data frame is data frame M starting in block B(x), wherein, if M

20   is odd, interleaving the data frame M comprises interleaving the data frame M over bursts in the

21   last frame in block B(x) and the first three frames of B(x + 2), and wherein interleaving the end-

22   of-data indicating frame comprises interleaving the end-of-data indicating frame over bursts in

23   the last three frames of block B(x + 2).

1   15.   The method of claim 14, wherein, if M is even, interleaving the data frame M

2   comprises interleaving the data frame M over bursts in the last three frames in block B(x) and

3   first frame in block B(x + 2), and interleaving the end-of-data indicating frame comprises

4   interleaving the end-of-data indicating frame over bursts in the last frame in block B(x) and first

5   two frames in block B(x + 2).

1   16.   The method of claim 15, wherein the end-of-data indicating frame comprises a

2   SID_FIRST frame according to a General Packet Radio Service protocol.

1   18.   The system of claim 38, wherein the first and second data frames comprise

2   respective first and second speech frames.

1   19.   The system of claim 38, wherein each data frame is interleaved over four bursts.

1   20.   A system for communicating over a wireless channel in a mobile communications

2   network, comprising:

3   an interface adapted to receive traffic data frames from a half-rate mobile station;

4   and

5   a controller adapted to process a first data frame interleaved over plural bursts

6   according to a first algorithm and to process a second data frame interleaved over plural bursts

7   according to a second algorithm,

8   wherein the bursts are part of a multiframe, the multiframe comprising plural

9   blocks, each block comprising four bursts, and wherein data frames I, I = 0 to M, are received

10   starting in block $B(x)$, the controller adapted to interleave data frame I over blocks $B(x + 2k)$

11   and $B(x + 2k + 2)$, where $k = INT(I/2)$.

1   21.   The system of claim 20, wherein the controller is adapted to:

2   for I being even, interleave traffic data frame I over the last three bursts in block

3    $B(x + 2k)$ and the first burst in block $B(x + 2k + 2)$; and

4   for I being odd, interleave traffic data frame I over the last three bursts in block

5    $B(x + 2k)$ and the first burst in block $B(x + 2k + 2)$.

1   22.   The system of claim 21, wherein the interface is adapted to further receive an end-

2   of-data indicating frame, the end-of-data indicating frame interleaved a first way if M is even and

3   a second way if M is odd.

1   23.   The system of claim 22, wherein the controller is adapted to:

2   for M being even, interleave the end-of-data indicating frame over the last burst in

3 block $B(x + 2k)$ and the first two bursts in block $B(x + 2k + 2)$; and

4   for M being odd, interleave the end-of-data indicating frame over the last three

5 bursts of $B(x + 2k + 2)$.

1   24.   The system of claim 23, wherein the end-of-data indicating frame comprises a

2 SID_FIRST frame according to a General Packet Radio Service protocol.

1   25.   The system of claim 23, wherein the end-of-data indicating frame indicates that

2 discontinuous transmission mode is starting.

1   26.   The system of claim 23, wherein the traffic data frames are carried in a wireless

2 channel portion, the interface adapted to receive traffic data frames from another mobile station

3 in block $B(x + 2k + 4)$.

1   27.   The system of claim 26, wherein the traffic data frames from the half-rate mobile

2 station comprises speech data.

1   28.   The system of claim 27, wherein the traffic data frames from the other mobile

2 station comprises another type of data.

1   29.   The system of claim 27, wherein the other mobile station comprises a full-rate

2 mobile station.

1   37.   The system of claim 38, wherein the bursts are part of a multiframe, the

2 multiframe having plural blocks,

3   wherein the first data frame n is interleaved according to the first algorithm by

4 interleaving the first data frame n in bursts of two different blocks, the two different blocks

5 selected based on n being an even number, and

6   wherein the second data frame n + 1 is interleaved according to the second

7 algorithm by interleaving the second data frame n + 1 in bursts of two different blocks, the two

8 different blocks selected based on n + 1 being an odd number.

1   38.   A system for communicating over a wireless channel in a mobile communications

2 network, comprising:

3   an interface adapted to receive traffic data frames from a half-rate mobile station;

4 and

5   a controller adapted to process a first data frame n, n being an even number, from

6 the half-rate mobile station interleaved over plural bursts according to a first algorithm and to

7 process a second data frame n + 1, n + 1 being an odd number, from the half-rate mobile station

8 interleaved over plural bursts according to a second algorithm,

9   wherein the first data frame n is interleaved according to the first algorithm in

10 response to n being an even number, and the second data frame is interleaved according to the

11 second algorithm in response to n + 1 being an odd number.

EVIDENCE APPENDIX

None.

Appln. Serial No. 09/715,787
Appeal Brief Under 37 C.F.R. § 41.37

i

RELATED PROCEEDINGS APPENDIX

None.

Appln. Serial No. 09/715,787
Appeal Brief Under 37 C.F.R. § 41.37

i